

## **Historic, Archive Document**

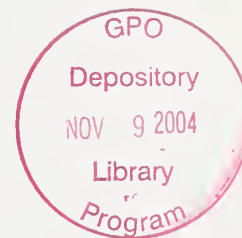
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# Wild Things

Partners and Projects - 2003

Admiralty National Monument and Juneau Ranger District



ECOLOGY



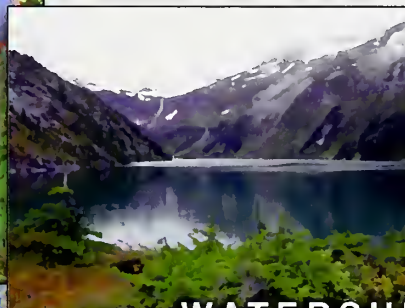
WILDLIFE



SUBSISTENCE



WATERSHED



FISH



USDA Forest Service Region 10



Tongass National Forest



Forest Service

R10-MB-512



## *From the Rangers...*

It's been several years since Admiralty National Monument and the Juneau Ranger District have produced an annual Fish, Wildlife, Watershed, Ecology, and Subsistence program summary that does more than just take care of an internal report requirement. Our goal is not a comprehensive report—we want to highlight the variety of work that takes place on our districts and to feature the highly valued contributions of our partners. It's also an opportunity to share some of our special emphasis areas such as environmental education and the unique Alaskan subsistence work. That doesn't mean we've forgotten to include the world-class fish and wildlife projects. We've also branched out into invasive species management and focused on critical watershed projects.

We enjoy doing the work with our partners, and this report is one way of saying thanks and reliving all those great memories.

*Susan Marthaller*

Susan Marthaller  
*Admiralty National Monument Ranger*

*Pete Griffin*

Pete Griffin  
*Juneau District Ranger*

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## *Admiralty National Monument / Juneau Ranger District Staff*

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Gwen Baluss .....	Biological Technician - Wildlife
Dennis Chester .....	Wildlife Biologist
Chad Hood .....	Biological Technician - Fisheries
Lance Lerum.....	Interdisciplinary Ecologist
Cindi Lagoudakis .....	Fish, Wildlife, Watershed, Ecology, & Subsistence Program Manager
Ken Post .....	Wilderness Program Manager
Larry Rickards .....	Wildlife Biologist
Pete Schneider .....	Fisheries Biologist
Ben VanAlen .....	Subsistence Fisheries Biologist

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## *Partners*

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We'd like to thank our partners for a successful year. Without their help providing staffing, coordinating projects, reviewing work, and providing technical assistance, we would never have been able to accomplish all the work we did.

Alaska Committee for Noxious and Invasive Plants Management  
Alaska Department of Fish and Game – Division of Commercial Fisheries  
Alaska Department of Fish and Game – Division of Habitat  
Alaska Department of Fish and Game – Division of Sport Fisheries  
Alaska Department of Fish and Game – Division of Wildlife Conservation  
Alaska Natural History Association  
Alaska Soil and Water Conservation  
American Bird Observatory  
Angoon Community Association  
Boy Scouts of America  
City and Borough of Juneau  
Discovery Southeast  
Forestry Sciences Laboratory  
Girl Scouts of America  
Hoonah Indian Association  
Institute for Bird Populations  
Juneau Audubon Society  
Juneau Invasive Plants Action  
Juneau Raptor Center  
Juneau Rotary Club  
Juneau School District  
Mendenhall Watershed Partnership  
National Marine Fisheries Service  
Natural Resources Conservation Service  
Nature Conservancy  
Partners In Flight  
SEAWHEAD  
Tlingit-Haida Central Council  
Trout Unlimited  
United States (U.S.) Fish and Wildlife Service  
U. S. Forest Service, State and Private Forestry  
U. S. Geologic Survey – Biological Resources Division  
University of Alaska – Fairbanks, Cooperative Extension  
4-H Club of Juneau

*There were many groups and individuals that contributed to our success. We apologize if we have omitted anyone.*





## *Program Vision Statement and Strategy*

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During the dark winter days of 2002, Admiralty National Monument and Juneau Ranger District staff met to create a vision statement and strategy for the Fish, Wildlife, Watershed, Ecology, and Subsistence program.

### **Our vision statement is:**

*We will maintain, restore, and enhance fish and wildlife stocks and their habitats through a cooperative process for the enjoyment, use, study, and appreciation of people now and into the future.*

As part of this work, we created goals and objectives that provide the general framework in which we operate.

### **These goals are:**

*Maintain the natural ecological conditions and processes throughout our area.*

*Restore the natural ecological conditions adversely impacted by previous management activities.*

*Manage habitat and subsistence resources to provide for customary and traditional use by rural residents.*

*Maintain effective information storage and sharing systems.*

*Promote conservation of plant and animal populations and their habitat through environmental education.*

*Maintain an enhancement program that incorporates local opportunities and community needs.*

*Foster the awareness and professional and public support of our programs.*

The goals and objectives resulted in action items that are incorporated into our five-year plan. One of our action items is to produce this report.



The Fish, Wildlife, Watershed, Ecology, and Subsistence program for Juneau Ranger District and Admiralty National Monument takes an active role participating in public education opportunities. Each year, there are a variety of opportunities for environmental education and watchable wildlife activities in Juneau and the surrounding areas. Some of the larger projects (e.g., Sea Week, Family Fishing Day and Fish/Wildlife cameras) are listed in separate discussions in this report. Others are discussed below.



Science fair winners receive their awards.

## Juneau Douglas High School Science Fair

Each year the Juneau Douglas High School has a Science Fair where student projects are judged in various categories. This year, Juneau Ranger District and Admiralty National Monument staff provided assistance, serving as project mentors and judges. The Fish and Wildlife and Recreation units combined to provide a new category for Natural Resources Management oriented projects. We coordinated with the Alaska Natural History Association (ANHA) to give away \$1000 in prize money to students who had projects that demonstrated thorough investigation into the natural science field. One prize of \$400 and four prizes of \$150 were awarded. We wanted to recognize as many students as possible instead of awarding a single "large"

prize. The judging was based on detailed criteria to avoid bias and maintain consistency. This year's involvement was such a success that we hope to continue our partnership with the local ANHA, and support students with winning projects.

## Career Days

Several members of our staff participated in "Career Day" activities in Juneau and Hoonah schools. Their presentations provided information to students on available careers in biology and with the Forest Service. A wide variety of additional professions were represented by government and private employers. In Juneau, each profession set up a booth in the gymnasium. Presenters answered questions, handed out materials and demonstrated "tools of the trade." Students had to visit a certain number of employers, ask questions, and get the presenter to sign their form verifying they had talked to the employer so they could document completion of this requirement. In Hoonah, we made classroom presentations to high school science students on "Careers Using Computer Skills" and "Careers in Biology." We also staffed a Forest Service booth supplied with literature and visual aids.



Ben VanAlen shows fish photos at career day in Hoonah.



## Second Grade Bird Banding

Every year, the Forest Service is invited to give a bird-banding presentation at Auke Bay Elementary School as part of the outdoor education curriculum. A mist net is set up in the forest near the school and the class waits for birds to fly into it. We use the waiting time to demonstrate bird identification skills by listening to the birds singing and matching the songs with the birds. Once a bird flies into the net it is measured, weighed and banded.



Don Martin talks to sixth graders about firearm safety.

## Hunter Education at Floyd Dryden Middle School

Admiralty National Monument and Juneau Ranger District staffs work with the Juneau school district, Alaska Department of Fish and Game, and volunteer sportsmen and women in presenting an annual Hunter Education program for the sixth grade class at a local middle school. The aim is to educate young people on important issues involved with hunting in Alaska and how to handle firearms safely. After attending this course, the students can earn their Alaska Hunter's Education certificate. Students attend classroom sessions on Wildlife Management, Game Laws, Meat Care, and the History and Care of Firearms as well as Outdoor Skills, Safe Firearm Handling and Marksmanship/Target Shooting at the gun range. The presentations were conducted twice in 2003, one small winter session (20 students) and one spring session (240 students).

## University of Alaska – Fairbanks Watchable Fish Video

The University of Alaska – Fairbanks (UAF) in partnership with the Juneau Ranger District fisheries staff created a watchable fish video for distribution to school libraries. The Forest Service provided UAF with a field technician to help acquire underwater footage and video footage from the Steep Creek fish cam located at the Mendenhall Glacier Visitor Center. We also shot some footage in an aquarium and in a natural stream setting, managing to get some spawning Dolly Varden and salmon on tape. The technician also helped to edit footage and create a fifteen minute video highlighting behavioral differences between juvenile salmon and steelhead.

## International Migratory Bird Day

Gwen Baluss, Juneau Ranger District biological technician, helped organize International Migratory Bird Day at the Mendenhall Glacier Visitor Center in conjunction with the U. S. Fish and Wildlife Service, Alaska Department of Fish and Game, and the Juneau Raptor Center. In addition to her guest speakers, Gwen treated everyone to an educational program and slide show on her work banding birds in Alaska and Mexico. About 150 people attended.



Gwen Baluss shows how bird banding is done at the Hummingbird Festival in Ketchikan.

## Hummingbird Festival

Another special event for Gwen was the Rufous Hummingbird Festival in Ketchikan. The festival was two days of bird banding demonstrations for school classes, members of the public, and an adult natural history class.

## Girl Scouts Participate in Environmental Education Field Day

In early July, the Juneau Ranger District provided an entire day of instruction and lectures for a group of Girl Scouts. Topics ranged from kayak handling to survival training. The Juneau Ranger District fisheries crew gave an interesting show on the interaction between aquatic organisms and a tidal mud flat environment at Eagle Beach. As a field exercise the scouts searched for Dungeness crab at a minus tide. Although they didn't find any crabs, lots of different organisms were exposed by an extreme low tide. Approximately 60 children and 10 adults attended the field trip and everybody had a great time.

# Environmental Education

## Cub Scouts Stabilize Stream Banks

Local Cub Scouts are always helping out the community. In the past, they worked with the Forest Service fisheries crew on several habitat rehabilitation projects. For the last several years, vegetation along a high-use trail has suffered significant degradation. The problem section, adjacent to an anadromous fish stream, contributes sediment into the stream.



Cub Scouts plant alders under the direction of Pete Schneider and Chad Hood.

Twin Lakes to educate students on salmon ecology/life history and fishing techniques. They were shown how to cast a fishing lure and other techniques used to catch fish. Everyone practiced for a while and then tried their hand at fishing from boats provided by the USFS.

## Other Presentations

Forest Service Subsistence fisheries biologist Ben VanAlen made several community and school presentations this past year, including a presentation to Juneau Charter School students on “Careers in Fisheries,” and a hands-on presentation at a Cub Scout Pack Meeting on “Mark-Recapture.” He presented a Mendenhall Glacier Visitor Center “Fireside” talk titled “Where the Sockeye Spawn” and a USFS-Sitka “Cabin Fever” talk titled “Sockeye, Subsistence, and Science.” He also gave two presentations at the October 2002 American Fisheries Society Alaska Chapter, annual conference—one on managing hatchery and wild salmon and the other on the use and importance of spawner-recruit data.

Biological Technician Gwen Baluss helped the Juneau Audubon Society with a songbird information sign at the Mendenhall Glacier. She also provided information for an educational pamphlet for Discovery Southeast.

The Scouts’ offer to help presented a perfect opportunity for some environmental education, and the chance to help stabilize the banks. A short lecture was given by the fisheries crew on the local ecology of the area, the benefit of healthy stream banks, and on the techniques they would be using for the project. The Cub Scouts successfully seeded eroding areas with a local mix of native grasses and transplanted about 15 alder seedlings from nearby locations. Then they fenced off the area to prevent further degradation and to allow their seeds and alders to take root. By late summer grasses and seedlings were doing great.

## Juneau Explorers

Juneau Explorers is a summer program that introduces students to a variety of scientific disciplines and outdoor recreational opportunities. Presentations were given at



Kyle Brownlee and Chad Hood present fishing techniques to the Juneau Explorers.



## Family Fishing Day at Twin Lakes

Every year the fisheries staff of the Admiralty National Monument and Juneau Ranger District partner with Mendenhall Glacier Visitor Center staff to host Family Fishing Day and give an opportunity to Juneau families to enjoy a day of recreation on a local lake. Our goal is for families to get excited about water sports, while educating kids and their families on aquatic ecosystems, fisheries management, and general natural resources management.

The day's activities include shore fishing for stocked salmon, guided boat fishing for the kids, fish printing, and a food vendor. The Forest Service provides the fish printing station (Gyotaku), six flat bottom boats and boat guides, and visits from Smokey Bear and Sammy Salmon. Every year the Alaska Department of Fish and Game and Trout Unlimited



Smokey Bear and Sammy Salmon pay a visit to Juneau's future fishers!

provide fishing poles and bait for the kids while the Juneau Rotary Club provides hotdogs, burgers, and soda. Approximately 175 children and 50 adults participated in the fishing events. The fish printing station was a big success, with the majority of children participating. In years past, frozen flounder, as well as any salmon the kids might have caught, were "pressed" into duty to make fish prints. This year we decided to use rubber fish for the printing, which worked great, lasted a long time (we can use them next year), made a very realistic print, and, best of all, were easy to catch. We had good luck fishing for stocked king salmon fingerlings, with lots of fish caught from the boats.



Making the print.



Chad Hood explains the life history of the stickleback.

## Sea Week on the Mendenhall Wetlands Refuge

Every 4th grader in the Juneau School District looks forward to the spring and their chance to take part in the annual "Sea Week" program. The Juneau School District gets volunteers from local agencies to work specific stations where kids learn about various aspects of the natural world. Part of our work with the kids this year was the tidal grass flat fisheries habitat station. We also gave some presentations on birds in wetland habitats and their habitat requirements. Two consecutive days of six half-hour sessions lured in 125 students and 12 adults, who learned a lot and had a good time doing it.

The talks were held on the Mendenhall River wetlands where minnow traps were used to capture fish and aquatic insects. The students were taught how aquatic organisms interact with the wetland environment, and they appreciated being able to inspect and handle the fish and aquatic insects up close. There were even a few sticklebacks. For some, these were the first fish they had ever handled.

Birds love the wetlands, so it is usually an excellent location to view birds of all types including sea ducks, gulls, songbirds and bald eagles. The overlapping habitats highlight the variety of ecological relationships and their complex connections.

For more information contact: Pete Schneider, [pschneider@fs.fed.us](mailto:pschneider@fs.fed.us), (907) 790-7406.



Learning about the wetland habitat requirements of birds.



# Davidson Creek Fishpass Construction and Coho Salmon Monitoring

## History of Project

Davidson Creek is located on the east side of Taku Inlet approximately 15 miles east of Juneau. A series of falls and chutes at the mouth of the creek that continue upstream for several meters presents a migration barrier to anadromous fish. The Davidson Creek watershed provides approximately 13 miles of stream habitat above the barrier. A Forest Service blasting project in 1990-91 created a step pool system to improve fish passage. In September 1993 and again in 1995, 50,000 coho pre-smolts (before ready to migrate to the ocean) were released above the barrier. Congregating adult coho were observed in mid-October 1995 at the creek mouth, but no adults were located above the barrier during aerial surveys later that fall. Subsequent monitoring efforts suggested that an upper barrier passes very few fish and only during very specific flows. However, spring minnow trapping efforts confirmed that at least a small number of adults successfully reached the spawning grounds of Davidson Creek. Juvenile coho salmon were found in low densities compared to the relatively high quality of the drainage for coho spawning and rearing. The low number of coho fry and adults observed each year indicates a low success rate of upstream migration. We felt it was one vertical falls that caused most of the migration problems. A radio-telemetry project conducted in the fall of 2001 and 2002 helped identify this final barrier to upstream migration (see description of tagging and tracking process below). Of the eighteen total fish radio-tagged in both efforts prior to modification (2001 and 2002), none successfully made it above this barrier area. In fact, only four of the eighteen fish made it up to the base of the barrier falls. These fish spent several days in a pool directly below the falls. Tracking of radio-tagged coho salmon has improved what we know about accessibility to upstream habitat in Davidson Creek. We hope this data will lead to improved management decisions regarding enhancement opportunities and future impact concerns.

## Spring trapping efforts

Every spring since 1995, in addition to the adult surveys, the upper drainage backwater habitats were surveyed for juvenile coho salmon. The presence of offspring would provide evidence of fish successfully passing the barrier. A helicopter dropped crews off in the mid to upper reaches of the creek. Standard aluminum hoop minnow traps baited with treated salmon eggs were used to catch juvenile coho. Traps soaked for roughly three hours in a variety of habitat types such as beaver ponds, backwater sloughs, and debris jams.

In 2002 and 2003, no juvenile coho were captured. However, resident Dolly Varden were captured in abundant numbers. It is possible that no coho reproduction occurred in the mid to upper reaches of the creek. It is also possible that juvenile coho were simply not located in the areas we trapped. Based on this information, it was decided to send a blasting crew into the site to modify the upper barrier in July 2003.

## Blasting effort

Using rock drills and explosives, the blasting crew was able to complete the drilling and blasting of the barrier falls, successfully widening this area and creating a series of step pools in an effort to improve upstream migration.

An effort to tag returning adults was made again in the fall. Unfortunately, no post-enhancement fish were tagged in 2003.

It is not known if the fish: 1) had already come and gone, 2) had yet to arrive, 3) were completely absent or extremely low in number this year, or 4) experienced little or no trouble navigating the modified chute/boulder area and had already moved into the upper reaches of the





Rock drills being used to create holes for explosives.

drainage. A late-fall aerial survey in the upper drainage for adults and/or redds (nests) yielded one mature coho, one group of sea-run Dolly Varden and no redds. Efforts to determine the success of access improvement will continue. If improved migration is confirmed (through radio-tracking efforts, spring juvenile counts, etc.) the project will yield a 13 stream-mile enhancement target.

Eventually, a self-sustaining coho population is expected to establish itself in Davidson Creek, providing an increase in both sport and commercial fishing in the Juneau area. In the future, steelhead and king salmon also may use the drainage.

## Tagging and Tracking Process

Adult fish tend to “pool up” below the system of chutes and boulders where sampling gear (rod and reel) is used to catch them. The idea is to tag fish while still bright and vigorous, and then release them back into the same area. A fixed radio telemetry receiver (ATS-Minnesota) that automatically stores tag frequencies is installed upstream just outside the range of the transmitters. The location of the fixed receiver is carefully chosen so that the tagged fish won’t register until they successfully migrate upstream of the barrier falls area. Typically, the data is downloaded on a weekly basis and is analyzed to see which fish have navigated past the barrier area and on which day. Hand telemetry equipment is also used to pinpoint the location of any “stuck” fish. This information is used to identify which areas of the creek could be enhanced or modified in the off-season to improve fish passage.



Tagging an adult coho salmon.

For more information contact: Pete Schneider, [pschneider@fs.fed.us](mailto:pschneider@fs.fed.us), (907) 790-7406.



Outmigration holding box and trough at the outlet of Dredge Creek.

## Dredge Lakes Underwater Video Monitoring

On the Juneau Ranger District, the fisheries program is working to perfect an underwater camera system to monitor outmigration (when young fish leave their home stream for the ocean) and upstream migration (escapement) of salmon. Our goal is eventually to replace a traditional weir with an electronic system. This could lead to a decrease in operational costs (such as time and staffing); this has the potential to match the accuracy of a weir, save money, and reduce occurrence of fish mortality due to handling.

The underwater color camera system used on the Juneau Ranger District uses a laptop computer, running SalmonSoft’s *Fish-Tick* capture software, and records digital footage right to the computer. This setup replaces the original infrared black and white camera and digital video recorder (DVR). The fish are forced (either naturally or

by building a man-made structure) to pass within a few feet of where the camera is installed in front of a brightly colored backdrop. Images are analyzed by the software and those with movement are recorded to a portable hard drive. The system can run 24 hours a day and only requires fish to pass closely to the camera (preferably through a well-lit area). No holding box is needed and structure upkeep is much simpler, although troubleshooting and power system maintenance occasionally can be time consuming. When the hard drive is full, it’s switched out with a second portable and brought back to the office where saved images are reviewed using the SalmonSoft *Fish Review* program. This is done daily or weekly to obtain counts, depending on system configuration. We use two 60GB USB portable hard drives that can be swapped while the system is on, so recording is continuous. Currently, a holding box is being used during out migration in the spring to verify camera counts.



Salmon moving upstream.



Once confidence in the video system is gained, the need for a holding box will be eliminated. This is the second full season of testing and the first using a laptop with recognition software in place of a DVR. Accuracy has been good in comparison to traditional weir counts, but overall system consistency is still an issue. We need to iron out some computer/software reliability and power concerns before we have full confidence in the system.

For more information contact: Pete Schneider, [pschneider@fs.fed.us](mailto:pschneider@fs.fed.us), (907) 790-7406.



Seine net with pre- and post-spawn eulachon in the Antler River.

the Forest Service and its partners (National Marine Fisheries Service, University of Alaska-Fairbanks, U. S. Geological Service, and Alaska Department of Fish and Game-Commercial Fisheries Division) make improved management decisions.

Part of the study focused on describing the size, reproductive ability, and age composition of eulachon. We formed descriptions of the habitat, incubation period, and environmental conditions (e.g., substrate, temperature, flow, salinity). Using a combination of spawning population and larval abundance data, we estimated adult population size. Sea lion index counts were also conducted daily in the Antler River and compared to eulachon abundance figures. This information was used to help determine the importance of eulachon to sea lion populations.

To determine run timing, seine nets were set daily from mid-April until mid-June using Catch per Unit Effort as an index of in-river abundance. Spawning habitat was assessed using radio telemetry (both manual and fixed station) and habitat classified using the Forest Service Region 10 Stream Survey Method. Timing of spawning was assessed by direct observation and data were collected from the first 20 prespawners and females captured with seine nets. Larval sampling and a mark/recapture of adults were used to develop an index of overall abundance in the river.

The data gathered for this project provided a better understanding of eulachon spawning habitat, and methods for habitat evaluation to determine eulachon population strength using adult mark/recapture and larval abundance were also tested and will be used for future surveys. The data from this project are still being processed and a final report of the findings will be released in spring 2005.

For more information contact: Pete Schneider, [pschneider@fs.fed.us](mailto:pschneider@fs.fed.us), (907) 790-7406.

## Berners Bay Eulachon Research

The purpose of this project is to determine the run timing and location/timing of eulachon (hooligan) spawning in Berners Bay. Located approximately 50 miles north of downtown Juneau, Berners Bay is accessible only by boat or plane. The bay is a popular destination for recreation and supports a wide diversity of wildlife. The viewing opportunities greatly increase each spring when the eulachon return to spawn. These herring-size fish are known in the Native population as the “salvation fish” as they are typically the first fish to return in the spring, signaling the end of a long winter. Because of their high oil content and since they keep for a long time, “candle fish” historically have been used for subsistence and trade. When dried they can be fit with a wick and lit like a candle. The life history of eulachon, including population and spawning habits, remains a mystery, but information from this study will help



Measuring eulachon for age, weight, and length.

## Steelhead Trout Monitoring

Steelhead trout are one of the most popular recreation fish in Southeast Alaska, and anglers seem to love these fish more every year. They are widely distributed in the southern part of Southeast Alaska and spawning populations exist in a





A lot of gear needs to be carried upstream to our sampled stream reaches.

number of Admiralty Island streams but their numbers are small and therefore extremely vulnerable to over-fishing and habitat destruction. Surveys have shown that some spawning Southeast Alaska steelhead populations have been declining. In order to properly assess impacts and manage steelhead stocks, we need improved baseline distribution and abundance numbers.

The Alaska Department of Fish and Game (ADF&G) - Sport Fish Division, Forestry Sciences Laboratory, and the Juneau Ranger District are working together to develop an inventory and monitoring program to collect data using established protocols. We accompanied ADF&G during snorkeling surveys to learn stream safety, survey techniques, and to assess which stream characteristics are desirable for snorkel surveys. We also expanded our “three pass depletion” minnow trap surveys, which we have been conducting for inventory and abundance numbers for various steelhead populations. It is our intent to return to these reaches each year to accumulate some trend abundance numbers.

In assessing several streams for suitability for snorkel surveys, we were unsuccessful in locating any candidate streams meeting our requirements. Several streams will be assessed next season. We conducted three-pass depletion surveys on six streams and located four streams suitable for yearly monitoring. We plan to set up long-term monitoring stations on several of these streams. A number of other streams were “prospected” with minnow traps to search for steelhead. We identified the fish in two streams where presence was not indicated in the Anadromous Catalog, but none in a stream where presence was indicated. We intend to investigate these streams further next year with more intensive sampling to confirm these changes.

For more information contact:  
Lance Lerum, llerum@fs.fed.us, (907) 790-7479.

## Steep Creek Fish and Beaver Cam

This project site is adjacent to the Mendenhall Glacier Visitor Center in the Mendenhall Valley near Juneau, Alaska. It receives more than 300,000 visitors annually and ranks as the third most visited site in Alaska. People from all over the world visit the Mendenhall Glacier to witness the spectacular scenery and learn about glacial landscapes and other natural processes. One of the most memorable experiences for many visitors is observing the spawning salmon in nearby Steep Creek.



Underwater view of coho salmon as they head up Steep Creek.



Juvenile steelhead trout: objective of our monitoring efforts.

## Underwater Fish Viewing

Fish viewing is so popular at Steep Creek that the resource is beginning to show its effects. Riparian vegetation has been damaged by well-meaning watchers and harassment of spawning fish is common. The Forest Service has initiated several projects to address the problem. This particular project, locally known as the “Fish-Cam,” was designed to relate important environmental messages, and to provide visitors with a unique watchable wildlife experience. The Fish-Cam provides a real-time underwater view of Steep Creek from a monitor located near the stream in a covered shelter. The camera

usually is installed each year in early July and removed for the season by late September.

The project includes an underwater color camera installed in nearby Steep Creek where sockeye and coho salmon tend to congregate. Often, Dolly Varden and cutthroat trout can be seen as well, following the salmon into the spawning grounds. The signal is transmitted 500 feet through buried cable to a 20 inch video monitor mounted in the wall of the covered shelter.

The Juneau Ranger District received a Natural Resource Conservation Foundation grant for \$1,000 for this project, and a local Boy Scout undertook this as his Eagle Scout project. He solicited funding and donations used to match grant funding, and organized volunteers to dig trenches and lay the hundreds of feet of cable, while Forest Service personnel built the camera housing and installed the monitor. The next phase for this project will include sending the video signal to the main MGVC building to be displayed on monitors and eventually making the video available on the Tongass website.

This project has been praised by locals and visitors to the area. The underwater view provides visitors with a first-hand perspective of stream ecology. It is easier to understand how spawning salmon react to each other, their habitat, and the organisms they encounter in the stream, when viewed from underwater. Each season this unique perspective excites thousands of people and ignites their interests in the natural environment and resource management.

## Beaver Cam

Expanding on the popularity of the fish camera at the visitor center, we thought it would be fun to install a camera in a beaver lodge on Steep Creek. Our goal is to establish and maintain wildlife cameras designed to deliver live images to TVs located in areas with high viewer potential. These cameras let people see things up close and personal that they would otherwise miss, and help increase awareness by providing unique viewing opportunities that will promote interest in and education about local wildlife.



Steep Creek beaver practicing landscape techniques.

Our beaver cam has infrared capability and delivers a black and white image to the same TV used to display fish cam footage. There is a trench for a 110-volt power line and a co-axial cable from the viewing area to a central junction box. Portions of the cable are submerged in the beaver pond and are designed to stay in place year-round. There are plans to install a second TV so that both the beaver and fish cams can be shown simultaneously.

The beaver cam requires a higher level of attention than the fish cam. Beaver activity has been more difficult to pinpoint and proper camera installation is much more involved. Creating minimal disturbance during daylight hours is critical. Since the lodge consists of a variety of “dens” or rooms, and the beavers don’t utilize the same areas consistently, they are not always visible. However, the camera has tremendous potential because it can be used, in theory, all year. Continued efforts will be made to improve viewing opportunities of the local beaver population, and the eventual goal is to place these live images onto the Tongass Forest Service website and give a worldwide audience the chance to see how the beavers work and live. We are looking into having the local cable company broadcast both videos on local TV channels.

For more information contact: Pete Schneider, [pschneider@fs.fed.us](mailto:pschneider@fs.fed.us), (907) 790-7406.



## Invasive Plants

Invasive plants are a growing problem in Alaska. In the past, many believed Alaska's remoteness offered protection from infestations, but now well-established infestations of these non-native plants have been documented. These invasive species are threatening Alaska's urban and wild land forests, and our riparian areas and non-forested wetlands. By taking aggressive action now, we can keep out many of the plants plaguing other parts of the continent. The objective of this program is to be proactive and identify those areas of infestation and to monitor and/or control those populations. We are also working to identify the factors leading to these introductions in order to manage those we can control.



Very proud Admiralty weed yankers with their bag limit.

Surveys conducted on Admiralty National Monument in 2002 and 2003 located populations of field mustard/turnip hybrid (*Brassica rapa*) spreading along beaches. Populations of hemp nettle (*Galeopsis tetrahit*) were also located at two sites on opposite sides of the island. Smaller populations of other species have been documented in beach fringe areas throughout Admiralty Island. These fringe areas were naturally disturbed by wave action during storm events and often provide the ideal, sunnier, disturbed soil locations preferred by many invasive plants. These areas were also the most highly visited sites by people, providing a way for invasive species introductions. Hand-pull control efforts have been conducted for two years on some of the *Brassica* populations and the results have been encouraging. Areas pulled in 2002 revealed markedly fewer plants this year compared to those adjacent areas not treated. These populations were treated again this year and the effort expanded into adjacent areas. In 2004, we hope to expand the control efforts into the hemp nettle areas.

The highly invasive Garlic Mustard plant (*Allaria petiolata*), which has wreaked havoc in the midwest and western Washington, has been found in Juneau. Several agencies (Alaska Soil and Water Conservation, Discovery Southeast, Alaska Committee for Noxious and Invasive Plants Management, Alaska Department of Fish and Game – Division of Habitat, Natural Resources Conservation Service, City and Borough of Juneau, Nature Conservancy, Tlingit-Haida Central Council, U. S. Fish and Wildlife Service, Forest Service, State and Private Forestry, and University of Alaska – Fairbanks, Cooperative Extension) and many citizen volunteers banded together as Juneau Invasive Plants Action (JIPA) to assess the spread of the Juneau invasion, and to hand-pull the adult plants before they set seed. One outcome of this initial effort was to learn that there is currently no mechanism for agencies to rapidly respond to new infestations.

We are working as an active member in JIPA on these control efforts and a parallel effort to establish a Memorandum of Understanding (MOU) whereby agencies and concerned individuals and groups may form a Juneau Weed Management Area to more proactively deal with these important resource issues. A draft agreement is currently undergoing agency review. Completion of the MOU should greatly increase the tools that we have in fighting these invasions.

For more information contact: Lance Lerum, [llerum@fs.fed.us](mailto:llerum@fs.fed.us), 907-790-7479.



## Ahrnklin River Sockeye Stock Assessment

USFS/ADF&G crews succeeded in marking (fin clipping) 909 sockeye salmon in the lower portion of the Ahrnklin River and recovered 43 marked fish out of 1,027 examined in upriver spawning areas. The preliminary escapement estimate of 21,000 (relative precision of + or - 15%) sockeye salmon above the Ahrnklin-Antlen confluence is close to the 24,000 estimated in 2001. Age, sex, and size data and survey count data were also collected. These are the first estimates of Ahrnklin sockeye escapement ever made. They helped document the importance of this stock to subsistence and commercial fisheries in the Situk-Ahrnklin estuary and will help improve spawner-recruit-based estimates of escapement goals for Situk and Ahrnklin sockeye salmon.

For more information contact: Ben VanAlen, [bvanalen@fs.fed.us](mailto:bvanalen@fs.fed.us), (907) 790-7426.



Dan Gillikin and Nate Catterson (Forest Service, Yakutat) sampling Ahrnklin River sockeye salmon.

## The Hoonah Trilogy

The Hoonah "Trilogy" Project's principal objectives are to estimate the sockeye escapement (adults returning to spawn) into Neva and Pavlof Lakes and index (determine the relative number of spawners) the sockeye escapement into Hoktaheen Lake. Project personnel also assist in indexing the sockeye escapement into Kook Lake (Basket Bay). Fish are counted through a weir at Neva Lake and out of a fishpass trap at Pavlof Lake. Mark-recapture studies are done at all four lakes to index escapements in the principal spawning areas. This is a cooperative project between the Hoonah Indian Association (HIA), U. S. Forest Service (USFS), and Alaska Department of Fish and Game (ADF&G). Preliminary project results are summarized below.

The 2003 season was the project's second of three on a U.S. Fish and Wildlife, Office of Subsistence Management, Fisheries Information Service (FIS)-funded contract. The project was allocated \$34,000 to USFS and \$76,000 to HIA. Hoonah Indian Association employed Fred Gallant, Jerome Abbott, Lyle James, Elijah Sheakley, and Bill Dalton. The HIA employees participated in USFS field safety training and traveled on USFS air charter flights. Wayne Lonn (ADF&G) operated the Neva weir and Robbie Piehl (USFS) and Sam Kroiz (USFS volunteer) assisted with fieldwork at Hoktaheen and Neva. Ben VanAlen (USFS) was the principal investigator. David Belton (HIA) and Meg Cartwright and Jan Conitz (ADF&G) were co-investigators.



Lyle James (Hoonah Indian Association) working the Neva Creek weir.

### Neva Lake

The Neva Lake sockeye escapement was larger than anticipated in 2003. Almost 5,000 sockeye escaped in 2002 and 11,099 were counted through the weir in 2003 (9,248 adults and 1,851 jacks). The coho count was 1,691 fish and the last of the run appeared to be passing when the weir was pulled. We operated the weir from June 4 to October 9. Project personnel succeeded in: monitoring directed sport and subsistence fisheries in June, July, and August; obtaining foot and boat survey counts of fish; validating the weir counts with mark-recapture studies; sampling 1,533 sockeye and 240 coho salmon for age, sex, and length data; sampling for limnology data; and collecting genetic baseline data from sockeye at the weir, in the main inlet stream and

beach spawning areas. Seven mark-recapture indexing trips were made in the main inlet stream and three mark-recapture events were completed for the later beach spawning population in early October. The healthy escapement documented in 2002 prompted the State to increase daily subsistence/personal use harvest limits from 10 to 25 fish in 2003. The mark-recapture results from this project will help refine the mark-recapture indexing methods we may use at other sockeye stock assessment projects in the region. These were the first escapement estimates ever made for sockeye salmon into Neva Lake and the relatively large size of the run was a welcome surprise given the small size of the lake.



Robbie Piehl (Forest Service) and Fred Gallant (Hoonah Indian Association) radio-tracking fish.

## Pavlof Lake

We estimate that 1,329 sockeye escaped in 2002 and a little over 1,500 in 2003. Project personnel succeeded in marking all of the 986 sockeye salmon that came up the fishpass between June 12 and August 23. They also marked 801 coho salmon. Six mark-recapture indexing trips were made in the main inlet stream and all survey counting, limnology sampling, and genetic sampling objectives were met. Age, sex, and length data was collected from 333 sockeye and 483 coho salmon but scale collection and record keeping procedures were poorly followed and not all the data was usable. Sockeye and coho salmon were also radio tagged as they entered the lake and we found that the sockeye spawn in the lower part of the main inlet stream (in our index area) and that the coho spawn in the upper reaches of the main inlet stream.

## Hoktaheen Lake

The crew camped at Hoktaheen Lake from September 3–28, 2003. They completed six index mark-recapture trips in the main inlet stream and three in the main outlet stream. A preliminary comparison of mark-recapture results from the past three



Pete McClusky, Jr., Leroy Martin, and Ed Gambell (Angoon Community Association) at the outlet of Kook Lake.

years indicates that the 2003 escapement was the largest. The mark-recapture index of sockeye salmon in the main inlet stream in early September was 1,350 in 2003, 740 in 2002, and 660 in 2001. The crew completed foot survey counts, sampled 503 sockeye salmon for age, sex, and length data, completed two limnology surveys, and collected genetic tissues from more than 200 main inlet stream and main outlet stream sockeye spawners.



Fred "wrestles" a length measurement and Elijah Sheakley "plucks" a scale to determine age.

## Kook Lake (Basket Bay)

On June 23, 2003 Ben VanAlen and Angoon Community Association (ACA) employees Leroy Martin, Peter McClusky, Jr., and Ed Gamble made the third annual trip to clear debris from the cavern entrances in Kook Lake's outlet stream. We cleared a lot of debris in 2001 but there was little debris to clear in 2002 and 2003. A

joint ACA and HIA crew made three trips into Kook Lake in August to get mark-recapture abundance indices, foot survey counts, and scale samples in the main inlet stream. The preliminary estimates were only 176, 165, and 278 fish in the stream on August 8, 15, and 22. A fourth trip was made into Kook Lake in mid-October to index beach spawning sockeye salmon, but they were too deep to catch with our 12' deep seinc. This is the third season that we've not been able to index many sockeye salmon in this system. Perhaps, given the extent of beach spawners and difficult access to them, we will use a weir to count fish entering this lake in future years.

For more information contact: Ben VanAlen, [bvanalen@fs.fed.us](mailto:bvanalen@fs.fed.us), (907) 790-7426.



## Wildlife Support

Larry Rickards, wildlife biologist for the Juneau Ranger District, made quite a few stops around the northern Tongass in support of other resources. He's been providing help to the Timber, Minerals, and Recreation staffs on the Sitka Ranger District, Hoonah Ranger District, and at his home base, the Juneau Ranger District. Larry's projects are identified below.

### Couverden Timber Sale

An analysis of one small Old-Growth Reserve (OGR) in the Swanson River watershed on the Couverden Peninsula was completed with the assistance of the U.S. Fish and Wildlife Service and the Alaska Department of Fish and Game—Division of Wildlife Conservation. The revised reserve included additional high value deer winter habitat, marten, and goshawk habitat. Connectivity with other old-growth habitat was incorporated into the analysis. Another adjacent small OGR and a medium OGR were also included in the analysis. The Swanson River and Homeshore Creek watersheds were also the focus for field reviews with the U.S. Fish and Wildlife Service of important brown bear foraging habitats, deer winter range, marbled murrelets, and marten habitat. In addition, a Neotropical migratory bird analysis was done. Executive Order 13186 provides the basis for federal agencies to take conservation measures for migratory birds.

### Greens Creek Tailings Expansion Environmental Impact Statement (EIS)

A migratory bird analysis was completed for inclusion in the EIS along with resource reports for the river otter, Sitka black-tailed deer and the marbled murrelet (Management Indicator Species). A review of the contractor's wildlife section of the draft EIS was also done.

### Sitka Ranger District

Nine Biological Evaluations for the Sitka Ranger District were completed to meet the requirements necessary for re-issuing special use permits. As part of this work, field visits were conducted for the majority of the projects and the ADF&G was contacted for information on wildlife habitats and wildlife sightings for each of the project areas.

### Hoonah Ranger District

As the wildlife biologist on an Interdisciplinary Team for their 2004 small timber sale program, Larry visited each of the sites and assessed habitat, wildlife use, and sightings. Larry completed: resource reports for migratory birds which are Management Indicator Species and Tongass Land and Resource Management Plan (Forest Plan) Species of Concern; a Biological Evaluation for sensitive species; and a Biological Assessment for Threatened and Endangered species. Sitka black-tailed deer are an important subsistence species for the residents of Hoonah, so a separate analysis was completed for deer.

For more information contact: Larry Rickards, [lricksards@fs.fed.us](mailto:lricksards@fs.fed.us), (907) 790-7426.

## Botanical Surveys

The complex geology, varied climate, and periodic disturbances of Southeast Alaska have resulted in a diverse flora. Most plant species on the Tongass are common. However, some are of limited distribution and numbers, and several may be locally or globally rare.

Federal regulations require that viable and well-distributed populations of all native (and desirable non-native) species be maintained across the national forest. Therefore, management activities on national forest lands are evaluated in order to assure the protection of all rare plant species and their habitats. Botanical surveys document the presence or absence of rare plants, find plants new to the analysis area, and more clearly define rare plant habitat and distribution.

There are currently 18 plants designated as sensitive species within the Alaska Region. "Sensitive" doesn't mean their feelings are easily hurt. They are considered sensitive because the Regional Forester determined there were viability concerns due to current or predicted downward trends in their populations or habitat capabilities, and, where these trends may lead to local or forest-wide disappearance and/or federal listing. Sixteen of these species are known or suspected to occur on the Tongass National Forest. Species are periodically added to or removed from the list based on new data.

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## Support to Other Resources

Botanical surveys performed by Ellen Anderson, botanist at the Juneau Ranger District, included shoreline, estuary meadow, forest fringe, fen, coniferous forest, riparian, and glacial stream gravel bar habitats. These surveys were associated with projects involving outfitter/guide use, trail and campsite development, and Alaska Army National Guard training sites.

Two rare plants were found. The first is a member of the hollyhock family, known from Oregon, Washington, and lower British Columbia, but recorded for the first time in Alaska. The second is a member of the sedge group, sighted only a few times on the Tongass. Both were in an estuary on the Chilkat Peninsula.

For more information contact: Ellen Anderson, [eanderson@fs.fed.us](mailto:eanderson@fs.fed.us), (907) 790-7427.





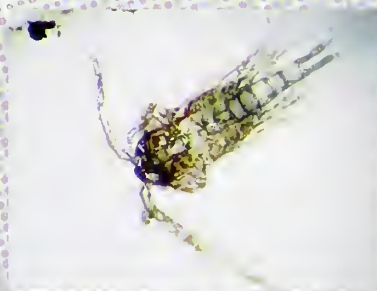
## Limnological Assessments

Admiralty Island has a diverse landscape of mountains, valleys, and lowlands created from several glacial advances and retreats. Numerous lakes, ponds, and wetlands can be found at sea level and continuing into the alpine. These are all part of an impressive water cycle beginning with Southeast Alaska's abundant supply of rain. These aquatic resources provide the forest with many different values. The purpose of this project is to build on previous inventories and monitor changes in water quality and chemistry for different lake types throughout the season. This information will be used to further our understanding of the aquatic ecosystems of Southeast Alaska and the effects of land management decisions to existing and potential fisheries habitat.

Water and zooplankton samples were collected from six lakes for lab analysis. A minisonde (see photo) is used to collect pH, dissolved oxygen, specific conductivity, and temperature measurements. Thermographs that had been recording at 2-hour intervals since 2002 were serviced and downloaded from nine lakes and placed at two additional sites.

Collected data has been entered into our lakes database for analysis and shared with our partner, Alaska Department of Fish and Game—Division of Sport Fish, and contributes to building baseline data and our knowledge of these aquatic ecosystems.

For more information contact:  
Lance Lerum, [llerum@fs.fed.us](mailto:llerum@fs.fed.us), (907) 790-7479.



Copepods and other zooplankton are collected, counted, and measured as part of our limnology investigations.



## Amphibian Monitoring

Amphibian populations are not well understood in Alaska partially due to their limited breeding range, isolated populations, and vulnerability to habitat changes. Six species of amphibians are known to occur in Alaska. The wood frog (*Rana sylvatica*) occurs throughout Alaska and into the arctic regions. The other species are all confined to Southeast Alaska. They are: boreal or western toad (*Bufo boreas*), northwest salamander (*Ambystoma gracile*), rough-skinned newt (*Taricha granulosa*), spotted frog (*Rana luteiventris*), and long-toed salamander (*Ambystoma macrodactylum*). There is a lack of data on population size, distribution, and trends. To obtain these baseline data, a standard approach for studying amphibians is necessary.

Since Admiralty Island consists largely of wilderness, with few recent local physical impacts related to human activities, it should provide ideal field opportunities for monitoring amphibian population trends. Populations of rough-skinned newts and boreal toads are known to exist on Admiralty. Other Alaska amphibian species may be present but have never been documented.

We have been working on documenting amphibian populations and testing protocols for monitoring population trends of a few of these populations. Literature review findings and correspondence with field herpetologists indicated that egg mass counts were the most reliable, statistically supported, method for this type of population trend monitoring. Survey techniques included the use of minnow traps to check for the presence of adult and larval stages of amphibians in ponds or wetlands. In the literature, drift fences with pit traps around breeding ponds may be used to check for indications of reproductive success by intercepting newly metamorphosed amphibians when they leave aquatic habitats for terrestrial sites. Drift fences were also used to intercept breeding adults returning to ponds. An attempt to modify existing proven protocols from Alberta, Canada for similar species was made and tested for applicability to our local Alaska populations.







Recommended only for trained professionals.

The population of visible tadpoles steadily lessened and predation by water beetle, dragonfly larvae, and newts may have contributed to the population demise. Significant numbers of small, one-year-old toads were observed at other locations though indicating reproductive success in some populations on the island.

Large numbers of breeding newts (as many as 50 captured in one overnight minnow trap) encouraged our hopes of testing the monitoring protocol. However, in three later visits to this newt lake and in visits to other newt populations, we failed to locate any newt eggs or observe any larvae or evidence of reproductive success. We realized that egg mass monitoring techniques will probably not be a valid method for these two species. Newts lay eggs individually and not in masses. These eggs are not easy to locate and do not lend themselves to being easily counted. Toads lay long strings of eggs of variable length. At the location where we observed the communal spawning, these egg strings were intertwined and impossible to differentiate and count with any repeatable results. This monitoring technique would probably be valid for those amphibians that do lay eggs in clusters or masses.

We did raise amphibian awareness and inspired many individuals to locate and report amphibian sightings in the area, and we have been able to document widespread distribution of newts and toads across Admiralty. No other amphibian species were located this year on Admiralty. Wood frog, spotted frog, and long toed salamander populations have been documented for Juneau Ranger District on the mainland. Further investigation is needed to refine a technique so we can effectively monitor these populations and their reproductive successes over time.

For more information contact: Lance Lerum, [llerum@fs.fed.us](mailto:llerum@fs.fed.us), (907) 790-7479.

Field identification guides and data forms were assembled and distributed to Admiralty and Juneau Ranger District field personnel. Collection kits, for the removal of toe or tail clips of any long-toed or northwest salamanders discovered, were also assembled and distributed to assist a university research biologist in California. Several sites with large breeding populations of toads and newts were revisited several times to gather breeding phenology (how they relate to climate) and habitat information.

We photographed rare diurnal group breeding activity of boreal toads and the resultant egg production. Subsequent monitoring of this large egg mass, produced by the toad spawning, revealed that the eggs had been killed by a fungal growth. Monitoring of a small fen pond, at another location, with initial large numbers of toad tadpoles and a few adult newts also failed to produce successful metamorphosis of toads.



An ideal opportunity to enlist local talent.



## Bird Monitoring

The Forest Service is a leader in bird conservation and strives to monitor resident and migratory bird populations on national forests. The Juneau Ranger District participates in land bird monitoring and surveys during the summer breeding season. Because of the long distances traveled by most of the local breeding species, population monitoring must take place over broad geographic scales to be effective. For this reason, studies are coordinated through the Partners in Flight program, a coalition of public and private partners throughout the Americas formed in 1992 in response to concern over population declines in many species. The Juneau Ranger District has participated in several broad-scale studies including: the Breeding Bird Survey (BBS), Monitoring Avian Productivity and Survivorship (MAPS), and Alaska Landbird Monitoring System (ALMS).

### Monitoring Avian Productivity and Survivorship (MAPS)

The Juneau banding station in the Mendenhall Recreation Area is in its ninth year of operation. MAPS is a mark-recapture study of songbirds, with semi-permanent stations throughout North America. The stations are designed to track bird survival from year to year as they return to the breeding grounds, and to measure productivity by obtaining a ratio of younger to older birds. All data is submitted to the Institute for Bird Populations in California where it may be pooled on a species or regional level for analysis.

This year, 98 birds representing 20 species, were captured. Seven individuals banded in previous years were recaptured. Most notable was a Ruby-crowned Kinglet first caught as an adult in 1999, making the bird at least five-years old this summer. The oldest recorded age for this species is five years and seven months.

In conjunction with the banding, feather samples were obtained and sent to the Neotropical Migrant Conservation Genetics Project at the University of California Los Angeles, where DNA will be extracted and populations compared between geographic regions. This work will be helpful in determining the winter range of local populations.

The MAPS station continues to attract participation from community members who come out to observe the birds in hand and even volunteer at the station. The 2003 volunteers included Darey Neff, Deanna MacPhail, Nina Mollett, Bev Agler, Liz Blecker, Laurie Lamm, and Matt Brooks.

### Alaska Landbird Monitoring System (ALMS)

Gwen Baluss was deeply involved in planning the logistics for developing this new survey technique for the whole Tongass National Forest. The ALMS is an offshoot of the Breeding Bird Survey (BBS) off-road point counts organized by the U. S. Geological Survey – Biological Resources Division. It is designed to monitor the long term trends in breeding populations of landbirds within all ecoregions in Alaska, but without some of the bias inherent in previous road based techniques (i.e., BBS). Plots of 25 listening points within a square kilometer are randomly located within the ecoregion. Gwen spent considerable time evaluating each plot for accessibility through several iterations until nine suitable plots for the Tongass were identified. At each plot, the presence of birds is recorded at as many points as possible during the breeding season (June). Habitat data is taken to develop species/habitat correlations and potentially relate bird populations to management activities. Due to the remote locations and the short window of opportunity, there are only about three days to complete the surveys at each plot. In 2003, two permanent count plots were established on the Juneau Ranger District, including completing the bird census and habitat data collection. One plot was located in the Juneau area near Windfall Lake, another near the southern limit of the district at Port Houghton. The emphasis for this year was refining study techniques and assessing the difficulties of accessing routes without roads or trails. Nonetheless, 28 points were surveyed and 42 bird species were recorded. The Juneau Ranger District wildlife crew also assisted the Yakutat Ranger District with their ALMS plot.

### Breeding Bird Survey (BBS)

Juneau Ranger District has participated in the BBS since 1992. In 2003, we contributed travel costs for volunteer Catherine Pohl to survey the annual BBS routes on the Hoonah Ranger District. We also recruited local volunteers for the Haines route.

## **Owls**

Nest boxes, which were placed throughout the district about 10 years ago, were checked for occupancy. One Northern saw-whet owl was found using a box as a roost site. Boxes may be moved over the next few years to better locations and become part of a U. S. Fish and Wildlife Service owl project.

## **Gulls and Terns at the Mendenhall Lake**

The Mendenhall Recreation area contains regionally important breeding sites for seabirds and shorebirds. Arctic terns fly over 12,000 miles a year traveling to and from their winter range in South America and Antarctica to nest on the shores of Mendenhall Lake. The National Seabird Plan considers them a high conservation priority.

In 2003, the Juneau Ranger District wildlife staff teamed with Mendenhall Glacier Visitor Center interpreters Matt Brooks and Gareth Hummel to obtain more information on the demographics of the colony. The colony was estimated to have a minimum of 90 adults, with at least 12 active nests. Three nests were watched closely on a weekly basis to learn more about the breeding chronology. This information can be used to help reduce disturbance to the colony during key time periods. The lakeshore also supported a mixed gull colony with the adult breeding population estimated at about 132 Herring gulls, 88 Glaucous-winged gulls, and 15 Mew gulls. Colony information was reported to the U. S. Fish and Wildlife Service for inclusion in a database of seabird colonies for the coasts of Alaska and Siberia. Gwen also assisted the Yakutat Ranger District with annual monitoring of the Aleutian terns colony there.

## **Black Swift Inventory**

Gwen spent considerable time in 2003 developing a forest-level inventory for Black Swifts. Black Swifts are rare in Southeast Alaska and little is known of their natural history. They are listed by Partners in Flight as a species of conservation priority in Southeast Alaska due to overall declining population trends. Locating swifts and identifying breeding habitat, if it exists, on the Tongass National Forest will help determine if there are management issues that need to be addressed. Gwen and seasonal employee Robert McKee developed a database of known swift sightings based on searching agency records, interviews with Forest Service and other agency personnel, and members of the birding community. They also contacted agency personnel to identify suitable habitat for potential surveys and develop logistics for getting to these remote sites. During July and parts of August 2003, they lead surveys for Black Swifts on the Petersburg, Wrangell, and Ketchikan/Misty Fiords Districts. They were assisted by Melissa Cady, Mike Whelan, and Alyson McHugh of the Wrangell Ranger District, and Bob Altman of the American Bird Conservancy. Swifts were found in the Stikine River and Hyder areas but no nests were found.

## **International Ties**

One of the Partners in Flight goals is to build international as well as inter-regional ties in order to better facilitate the transfer of information throughout all parts of a migratory bird's range. Gwen has lent her expertise to other bird banding programs on a volunteer basis. In 2003, she spent time in Oaxaca State in Mexico and in Canada's Yukon Territory banding some of the same species that are found around Juneau.

For more information contact:

Gwen Baluss, gbaluss@fs.fed.us, 907-790-7425, or Dennis Chester, dchester@fs.fed.us, 907-790-7424.



## Mendenhall Glacier Recreation Area Beaver Management Plan

The Dredge Lakes Unit of the Mendenhall Glacier Recreation Area (MGRA) is a developed fisheries consisting of a series of man-made lakes (created from dredge pits and dikes) with low gradient connecting streams. All the water that flows out of this system funnels through a concrete structure in the dike next to the Moose Lake holding pond before emptying into the Mendenhall River. In addition, the area is heavily used by the public for recreational purposes because of the many trails and close proximity to the Mendenhall Valley population center. Beaver activity has negatively impacted fisheries and trail management objectives in the area by continually damming culverts and connecting streams, and flooding trails. A Beaver Management Plan was prepared for the area to reduce beaver populations and help meet other resource management objectives.

In 2003, we used public scoping to determine concerns and ideas for managing the beavers in this area. A Categorical Exclusion/Decision Memo was prepared and signed. The plan has been completed and three beavers were trapped and relocated.

Removal of beavers and their dams should allow fish access to spawning and rearing habitat and will allow out-migration. We expect to be able to maintain a resident cutthroat trout fishery, anadromous salmon, and Dolly Varden char. Lowering water levels will maintain trail access.

One of the public concerns about the plan is the effect of lowered water levels on waterfowl use of the ponds. Therefore, the plan includes monitoring to document migratory and breeding waterfowl use of the area.

We initiated beaver trapping in July 2003 using a volunteer trapper. Three beavers had been caught and transplanted as of September 30, 2003. Waterfowl surveys began in August 2003. In the future, surveys will be conducted monthly during the ice-free season. The “watch and wait” technique is used where surveyors walk discreetly to the edge of each lake to minimize disturbance to waterfowl. The same observation points are used on each visit. We observe for at least ten minutes to allow birds to recover from the disturbance and leave cover. Waterfowl and other species are identified by species, sex, and age. We note numbers and other pertinent information such as whether they were paired or broods etc. Biologists are assisted by volunteer birders from the community. The intent is to cover as many of the lakes as possible in as short a time as possible to minimize double counting.

This is the first year of a long-term monitoring plan. Two surveys were conducted to work out the details but few ducks were seen due to the season. In the future, we plan to map habitats and document any habitat changes related to changes in water level. Water levels will be used as an index of beaver management. Over time, we expect that beavers will recolonize the trapped out ponds and we will need to reinstate trapping efforts every few years.

For more information contact: Pete Schneider, [pschneider@fs.fed.us](mailto:pschneider@fs.fed.us), 907-790-7406  
or Dennis Chester, [dchester@fs.fed.us](mailto:dchester@fs.fed.us), 907-790-7424.



# Pack Creek Cooperative Management Area Bear Viewing Site

Pack Creek is a cooperative project with Alaska Department of Fish and Game to staff and provide brown bear viewing opportunities for the public while safeguarding both visitors and bears. This is a fee demo site that returns funding to the project for administration of the site. Admiralty wildlife staff contributes technical and financial support for the operation of the site as a component of our environmental and interpretive education program.



Viewing objective.

Upon arrival at Pack Creek, visitors are met by Pack Creek staff and given instructions and interpretive information about the project, bear ecology and behavior, and safety rules and procedures to follow while visiting the site. Bear presence, movements, and behavior is monitored and documented throughout the season.

Visitor numbers were down this year which was attributed to weakness in the economy. A late spawning run and low spring stream flows provided an unusual opportunity to view adult males in the estuary. The usual cadre of sub-adults and sows with cubs also provided excellent viewing experiences for the visitors. Visitors were once again afforded an excellent opportunity to safely view some of Alaska's most majestic wildlife.

For more information contact: Ken Post, [kpost@fs.fed.us](mailto:kpost@fs.fed.us), (907)-790-7482.







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